# Section 3

## 3.0 ALTERNATIVES

### 3.1 Introduction

The purpose of this section is to identify, describe, and compare the programmatic alternatives for the execution of the Chemical and Biological Defense Program (CBDP). This section also summarizes decision methodology used to identify the environmentally preferred alternative. Comparison of the alternatives is undertaken in compliance with the Council on Environmental Quality regulations (40 *Code of Federal Regulations* [CFR] 1500 through 1508) implementing the National Environmental Policy Act (NEPA) and the complementary regulations for the Office of the Secretary of Defense (32 CFR 188), the Air Force (32 CFR 989), the Army (32 CFR 651), and the Navy and Marine Corps (32 CFR 775).

The treatment of alternatives is the heart of an environmental impact statement (EIS). For every choice among alternatives, tradeoffs must be considered. The goals of the alternatives presentation are to: (1) define the issues and tradeoffs so as to provide the decision makers with a basis for choosing among the reasonable options, and (2) provide a solid background to facilitate informed public input in accordance with 40 CFR 1502.14.

### 3.2 Description of the Alternatives Considered

#### 3.2.1 Proposed Action

The proposed action consists of the execution of an integrated CBDP designed to protect our soldiers, sailors, marines, and airmen from the evolving chemical and biological threats they may encounter on the battlefield. The proposed action has been discussed in detail in Section 2.0.

#### 3.2.2 No Action Alternative

A No Action Alternative is required by CEQ regulations implementing NEPA. The No Action Alternative for this programmatic EIS (PEIS) is continuation of current CBDP operations as described in and covered by existing environmental analyses.

#### 3.2.3 Other Reasonable Alternatives

No other reasonable alternatives were identified during the public scoping process.

### 3.3 Impacts of Alternatives

This PEIS was prepared for an ongoing program, with various research, development, and acquisition activities conducted in existing facilities. Therefore, impacts on the environment associated with construction actions are not addressed in this document.

The analytical methodology outlined in Section 5.1 provides the framework for programmatic evaluation. For each environmental attribute discussed in Sections 5.2 through 5.12, the potential impacts of CBDP activities are identified. The actual impacts at the example sites are then evaluated qualitatively, based on site-specific information on the existing environment

discussed in Sections 4.2 through 4.7 and the applicable benchmark regulations and guidance and mitigation measures for existing CBDP activities discussed in Section 2.3.

The potential for significant adverse impacts is related primarily to safety, health, security, and waste management considerations. This conclusion, generally identified in the *Biological Defense Research Program Final Programmatic Environmental Impact Statement* (U.S. Army Medical Research and Development Command, 1989), basically still holds true today, although the security arm has taken on increased emphasis since 11 September 2001. Safety, health, and security impacts apply to workplace activities at CBDP sites, which may affect the workforce through possible exposures to hazardous and/or toxic chemicals; high-hazard biological materials (for the purposes of this document, those materials requiring biosafety level-3 and -4 containment facilities and procedures); lasers; and radiation. Waste management impacts result from the accumulation, storage, treatment, and disposal of sanitary and/or industrial wastewater, solid and hazardous waste, and air emissions at and from sites of CBDP activity, which may also affect the workforce and the local population. In addition, potential environmental degradation from the waste management impacts can lead to secondary impacts on various environmental attributes, as discussed in Section 1.3.3.2.

Adherence to the benchmark regulations and guidance, including regulations of the Department of Defense components presented in Section 2.3, provides engineering controls, protective equipment, and procedures, as applicable, for security and to protect worker health and safety and the environment. Additional safeguards are available through following state and local regulations and site-specific regulations and standard operating procedures for CBDP activities, as illustrated for the selected example sites in Section 2.4. If these provisions are effective, significant adverse consequences would be expected to occur only as a result of either procedural noncompliance—negligent or intentional—or as a result of failure of the engineering controls or protective equipment.

The effectiveness of these provisions on programmatic occupational safety and health and public health is demonstrated in Section 5.12, using programmatic evaluation reports and documented information on the occurrence of accidents, injuries, or laboratory-acquired illnesses to demonstrate how existing protective measures for occupational safety and health have performed. Each of the analyses presented in Sections 5.2 through 5.12 ends with a summary and qualitative conclusions concerning existing impacts of CBDP activities on the environmental attributes. This provides the basis for projection from the example sites to the programmatic level, presented in Section 5.13. Analyses of cumulative impacts appear in Section 5.14, comprised of cumulative impacts with time, cumulative impacts with other programs, and regionally cumulative impacts.

## 3.4 Comparison of Alternatives and Selection of the Preferred Alternative

Comparison of the alternatives and selection of the Preferred Alternative appear in Section 5.15. The conclusions reached in Sections 5.13 and 5.14 were applied to qualitative evaluation of potential future environmental impacts for both the proposed action and the No Action Alternative. This information provided the basis for selection of the proposed action as the Preferred Alternative.